# **ASX Announcement** (ASX: HMX)



5th June 2015

## **Results of Overlander Central and Andy's Hill Drilling**

Hammer Metals Limited (ASX:HMX) ("Hammer" or "the Company") is pleased to announce results from the Company's recent drilling at the Overlander Central and Andy's Hill prospects. The drilling continues to demonstrate the regionally significant zones of IOCG style alteration and copper mineralisation at each prospect.

#### **Overlander Central**

- Mineralised rhyolite breccia unit intercepted with 71 m at 0.31% Cu;
- Builds on Overlander system as a whole, which includes recent drilling results;
  - OVD001: 97.3m at 0.54%Cu from 358.7m including 21m at 1.7%Cu from 435m and 6m at 3.3% Cu from 446 (ASX:HMX 18/5/2015);
  - OVRC029: **75m at 1.3% Cu** from 176m including **28m at 1.9% Cu** from 189m and **16m@ 1.9% Cu** from 226m (ASX:HMX 16/9/2014);
- Breccia mineralisation consistent with previous drilling;
- IP chargeability and resistivity modelling from recent program highlights large extent of the mineralisation at Overlander.

#### Andy's Hill

 Andy's Hill drill holes intercepted further broad widths of massive magnetite and red rock alteration with disseminated copper and Rare Earth Element mineralisation.

#### **Overlander Central**

The Overlander prospect has been demonstrated by Hammer as a regionally significant zone of alteration and copper mineralisation with IOCG style, shear hosted and rhyolite breccia-hosted copper +/- cobalt, silver, gold and lead-zinc mineralisation. (Refer to ASX releases dated March 18<sup>th</sup>, 2015, April 17<sup>th</sup> 2015 and May 11<sup>th</sup> 2015.)

The 200ppm copper-in-soil anomaly which encompasses the entire Overlander area is over 3 kilometres long and along with the extensive IP chargeability and resistivity responses from the recent surveys suggests some interaction between the alteration and mineralizing events.

OVRC032 is Hammer's second hole into the rhyolite breccia unit at Overlander Central which abuts the eastern side (or footwall) of the Overlander Shear. OVRC024 which was drilled during 2014 intersected 116m @ 0.34% Cu (with the drill hole terminating in mineralisation). In 2006, Cerro Resources Limited drilled K-11 which intersected 110m @ 0.31% Cu, again with the hole terminating in mineralisation.

OVRC032 was targeted on a shallow zone of increased IP chargeability and low resistivity about 100 metres along strike to the north of OVRC024 and intercepted 71 metres at 0.31% Cu from 61 metres within a broader envelope of 104 metres at 0.25% Cu, consistent with previous intersections. Sections of the breccia were stoped out with barren post-mineral pegmatite dykes. Within this envelope zones of higher grade mineralisation included 3m at 2.1% Cu from 66m and 3m at 1.2% from 128m.



Mineralisation is hosted within a structurally disrupted zone on the margin of the Overlander shear system. The western portion of the mineralised zone is hosted by sheared metasediments with more disseminated and stringer style sulphide mineralisation within the rhyolitic crackle breccia.

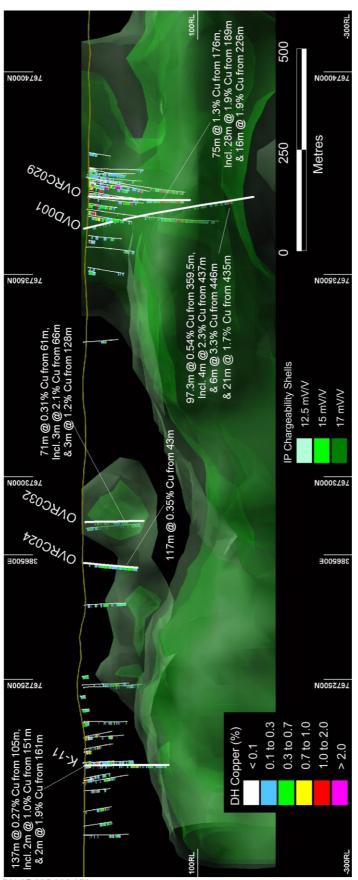
Petrological examination indicates that the sulphides are composed of pyrite, chalcopyrite, covellite, chalcocite and minor galena and sphalerite. The unit is strongly silicified, brecciated and potassium altered.

To date drilling has tested 250 metres of the mapped two kilometre strike length of this unit to relatively shallow depths. The breccia is up to 75 metres in width hence the consistent disseminated mineralisation represents a large tonnage copper target.

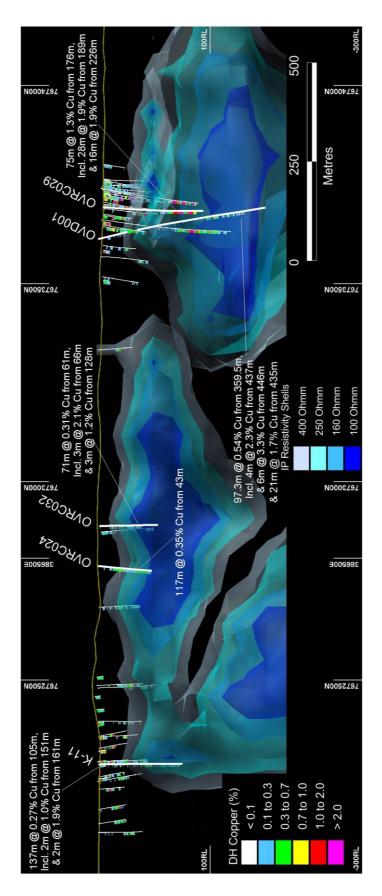
Inversion modeling of the recent IP survey data has outlined several strong chargeability and resistivity anomalies below the current depth of drilling. These anomalies are interpreted to be related to the breccia zones as well as the Overlander Shear Zone and the Overlander North IOCG target suggesting a large scale alteration system was operating at Overlander and an interrelationship between the mineralisation styles.

The following 2 pages show an Overlander Central Long Section with drill holes marked which have intersected the Rhyolite Breccia and Overlander North OVD001. The figures highlight chargeability (first figure) and resistivity (second figure) anomalies.

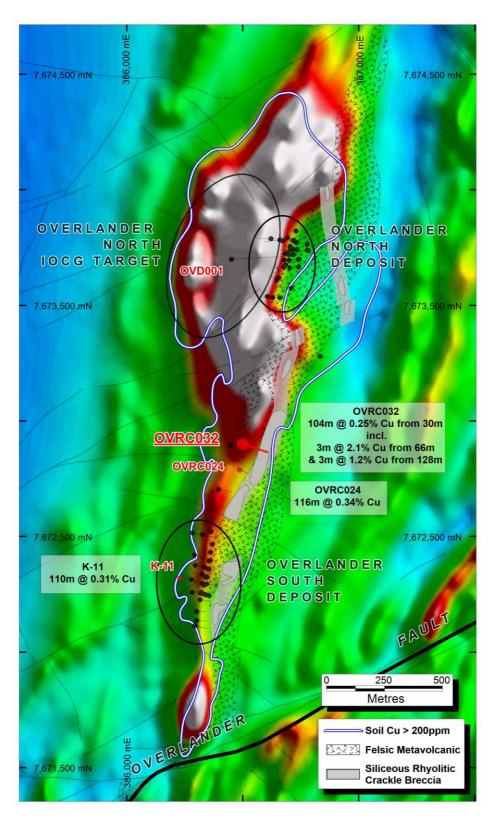






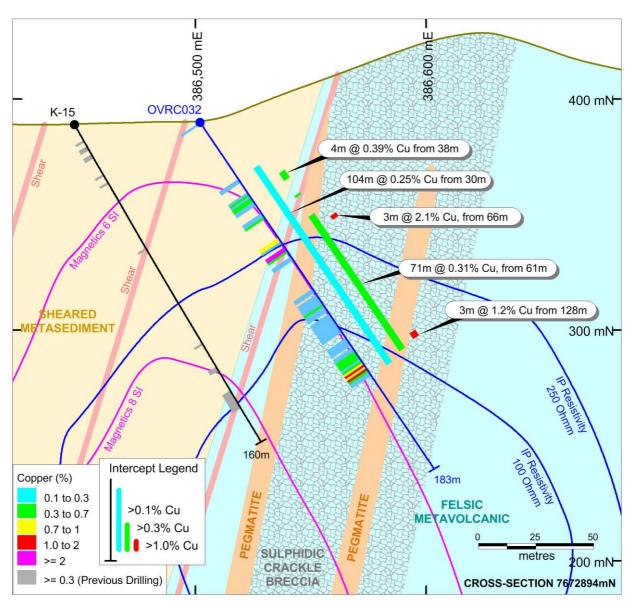






**Overlander Project** 





**Overlander Central Drill Section OVRC032** 

### Andy's Hill

Three RC holes for 903 metres (AHRC001-AHRC003) were drilled at the Andy's Hill IOCG Prospect, located approximately 5 kilometres south of the Overlander North IOCG anomaly.

Hammer has recently completed detailed gravity, magnetic and IP surveys at Andy's Hill which outlined several large overlapping anomalies indicative of IOCG mineralisation which had not been adequately tested by previous drilling. (Refer to ASX releases dated November 26<sup>th</sup> 2014 and March 17<sup>th</sup> 2015.)

AH-001 drilled in 2011 intersected 298m @ 0.1% Cu from 119 metres with strongly elevated rare earth elements (cerium and lanthanum) (95 metres at 1239 ppm Ce and 960 ppm La from 260 metres) within a broad magnetite – albite – actinolite alteration zone.



The recent drilling was designed to provide an initial test of zones of low IP resistivity and chargeability and elevated gravity to the south of AH-001. The three drill holes intersected broad zones of semi-massive magnetite and red rock altered meta-sediments containing widespread disseminated copper mineralisation (chalcopyrite) along with intervals of strongly elevated rare earth elements (Cerium and Lanthanum).

The copper mineralisation tended to occur between and on the margins of the magnetite bodies associated with actinolite-albite-pyrite-magnetite alteration. The holes did not fully penetrate through the alteration zone which is up to 300 metres wide (or the interpreted geophysical) anomalies and may be deepened by diamond core drilling at a later date.

The best results include 24 metres at 0.28% Cu from 209 metres in AHRC001 and 14 metres at 0.2% Cu, 2469ppm Ce and 1955ppm La from 63 metres in AHRC003. Peak values of 1.98% Cu, 7420 ppm Ce and 5780 La were recorded over individual metre intervals.

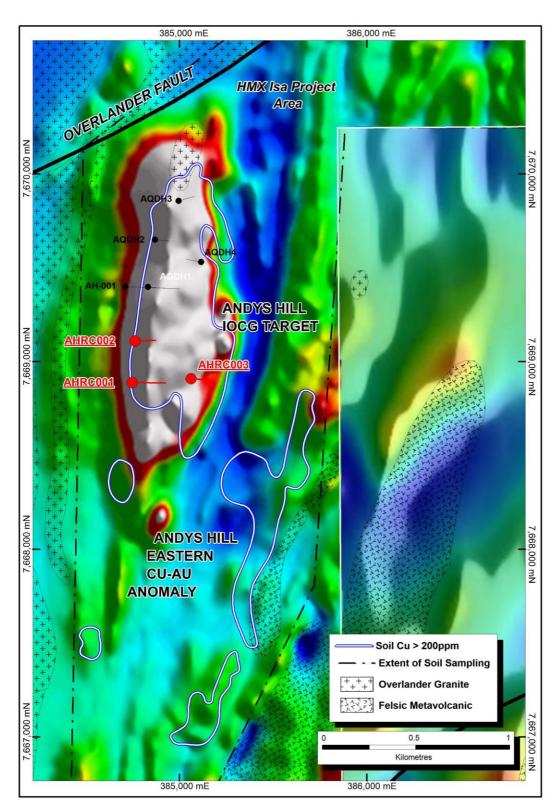
The drilling confirmed the significant size and complexity of the IOCG system at Andy's Hill with further work focusing on the alteration and geochemical data to determine vectors to ore grade copper mineralisation within the system as well as structural mapping to located breccia zones.

For further information, please contact:

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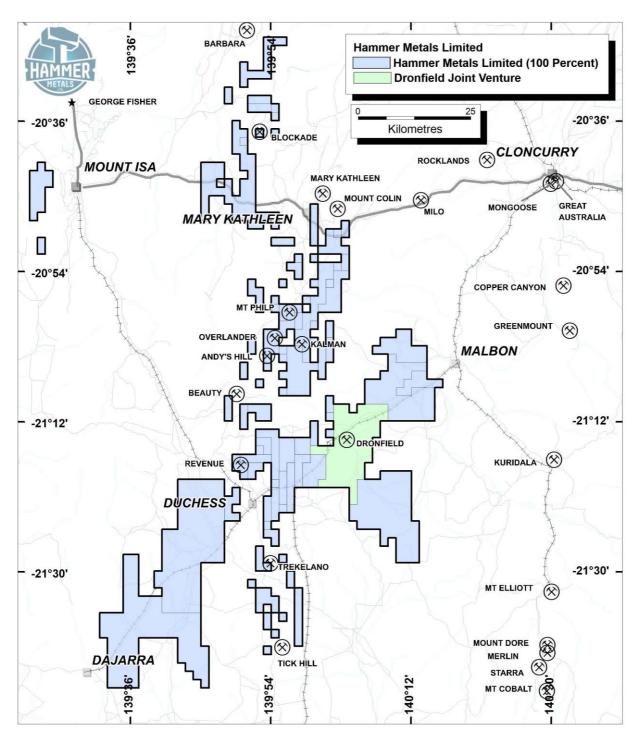
Tel: +61 8 9271 0149





**Andy's Hill Project** 





**Project Location** 



Hole	East*	North*	RL	Azimuth*	Dip	Total Depth
OVRC032	386502	7672894	390	155	-55	183
AHRC001	384747	7668889	480	85	-58	357
AHRC002	384762	7669110	480	88	-66	297
AHRC003	385061	7668910	472.38	92	-60	249
* - Location and Azimuth refer to UTM Projection (GDA94, Zone54 Datum)						

Hole	Cu Threshold (%)	Interval		From	То	Cu(%)	Ce(ppm)	La(ppm)	Comment
	0.1	104		30	134	0.25			
		4		38	42	0.39			
	0.3	1		50	51	0.39			
OVRC032		71		61	132	0.31	N/A*	N/A*	
									0.11g/t
	1	2	incl.	66	68	2.93			Au
		3	incl.	128	131	1.20			
		T							
		24		209	233	0.28	253	160	
AHRC001	0.2	1		305	306	0.22	159	104	
		1		350	351	0.33	417	322	
	0.1	7		58	65	0.13	152	59	
	0.2	1	incl.	50	51	0.35	65	34	
		1	incl.	62	63	0.37	145	59	
AHRC002		1		127	128	0.50	35	16	
ANKCOUZ	0.1	5		165	170	0.18	194	135	
	0.2	2	incl.	168	170	0.34	174	119	
	0.1	13		198	211	0.11	1068	887	
	0.2	1	incl.	205	206	0.24	2020	1740	
	0.1	21		35	56	0.10	210	155	
	0.2	15		52	67	0.28	536	401	
	1	1	incl.	66	67	1.98	970	730	
ALIDOOO	0.4	17		61	78	0.19	2081	1640	
AHRC003	0.1	12		163	175	0.20	1640	1298	
	0.2	2	incl.	169	171	0.67	1440	1105	
	0.1	6		198	204	0.14	61	25	
	0.2	1	incl.	203	204	0.26	78	38	
	* - For OVRC032 Cerium and Lanthanum are not reported								



#### **Competent Person's Statement**

The information in this report as it relates to exploration results and geology was compiled by Mr. Mark Whittle, who is a Member of the AusIMM and a consultant to the Company. Mr. Mark Whittle has sufficient experience which is relevant to the style of mineralisation and type of deposit under consideration and to the activity which he is undertaking to qualify as a Competent Person as defined in the 2012 Edition of the 'Australasian Code for Reporting of Exploration Results, Mineral Resources and Ore Reserves'. Mr. Whittle consents to the inclusion in the report of the matters based on the information in the form and context in which it appears.

### **JORC Code, 2012 Edition**

## **Table 1 report – Overlander Central and Andy's Hill**

 The primary subject of this release is to report on the results of reverse circulation drilling conducted at Overlander Central (OVRC032) and Andy's Hill (AHRC001, AHRC002 and AHRC003).

### **Section 1 Sampling Techniques and Data**

(Criteria in this section apply to all succeeding sections in this information release.)

#### **JORC Code explanation** Criteria Commentary Sampling Nature and quality of sampling (eg cut Samples were selected using techniques channels, random chips, or specific geological criteria (visual specialised industry standard inspection) and Niton portable measurement tools appropriate to the XRF analysis. minerals under investigation, such as All samples submitted for assav down hole gamma sondes, or underwent a fine crush with 1kg handheld XRF instruments, etc). riffled off for pulverising to 75 These examples should not be taken micron. Drilling samples were as limiting the broad meaning of submitted for 4 acid digest sampling. followed by fire assay for gold and Include reference to measures taken ICP analysis for a range of to ensure sample representivity and elements including copper, silver, the appropriate calibration of any cobalt and molybdenum. measurement tools or systems used. · Aspects of the determination of mineralisation that are Material to the Public Report. In cases where 'industry standard' work has been done this would be relatively simple (eg 'reverse circulation drilling was used to obtain 1 m samples from which 3 kg was pulverised to produce a 30 g charge for fire assay'). In other cases more explanation may be required, such as



Criteria	JORC Code explanation	Commentary		
Drilling techniques	<ul> <li>where there is coarse gold that has inherent sampling problems. Unusual commodities or mineralisation types (eg submarine nodules) may warrant disclosure of detailed information.</li> <li>Drill type (eg core, reverse circulation, open-hole hammer, rotary air blast, auger, Bangka, sonic, etc) and details (eg core diameter, triple or standard tube, depth of diamond tails, facesampling bit or other type, whether core is oriented and if so, by what</li> </ul>	Reverse Circulation Drilling (nominal 5.5" diameter holes).		
Drill sample recovery	<ul> <li>method, etc).</li> <li>Method of recording and assessing core and chip sample recoveries and results assessed.</li> <li>Measures taken to maximise sample recovery and ensure representative nature of the samples.</li> <li>Whether a relationship exists between sample recovery and grade and whether sample bias may have occurred due to preferential loss/gain of fine/coarse material.</li> </ul>	<ul> <li>Recovery of RC samples were visually estimated. Average recovery of the samples was estimated to be in the range of 80-90%.</li> <li>The RC was drilled dry using a booster and auxiliary compressor. Care was taken to avoid sample contamination.</li> <li>No sample recovery bias was observed through mineralised zones.</li> </ul>		
Logging	<ul> <li>Whether core and chip samples have been geologically and geotechnically logged to a level of detail to support appropriate Mineral Resource estimation, mining studies and metallurgical studies.</li> <li>Whether logging is qualitative or quantitative in nature. Core (or costean, channel, etc) photography.</li> <li>The total length and percentage of the relevant intersections logged.</li> </ul>	<ul> <li>All drill chips were geologically logged in detail by Hammer Metals geologists recording lithology, alteration and mineralisation, weathering, colour, structure, and any other features of the sample to a level of detail to support appropriate studies.</li> <li>Small washed samples from each one metre RC interval were collected and stored in a chip tray.</li> <li>The hole was logged in full.</li> </ul>		
Sub- sampling techniques and sample preparation	<ul> <li>If core, whether cut or sawn and whether quarter, half or all core taken.</li> <li>If non-core, whether riffled, tube sampled, rotary split, etc and whether sampled wet or dry.</li> <li>For all sample types, the nature, quality and appropriateness of the sample preparation technique.</li> <li>Quality control procedures adopted for all sub-sampling stages to maximise representivity of samples.</li> <li>Measures taken to ensure that the sampling is representative of the in situ material collected, including for instance results for field duplicate/second-half sampling.</li> </ul>	<ul> <li>Sample collection and size is considered appropriate to the target-style and laboratory analytical methods employed.</li> <li>RC field duplicates were collected by riffle-splitting on-site 1 metre sample return. Standard reference samples and blanks were each inserted into the laboratory submissions at 25 sample intervals. ALS applied industry-standard QAQC procedures throughout the sample stream.</li> <li>The 3kg riffle split samples from the sample return, and the sample preparation procedures used by ALS</li> </ul>		



Criteria	JORC Code explanation	Commentary		
	Whether sample sizes are appropriate to the grain size of the material being sampled.	are appropriate for the material being sampled.		
Quality of assay data and laboratory tests	<ul> <li>The nature, quality and appropriateness of the assaying and laboratory procedures used and whether the technique is considered partial or total.</li> <li>For geophysical tools, spectrometers, handheld XRF instruments, etc, the parameters used in determining the analysis including instrument make and model, reading times, calibrations factors applied and their derivation, etc.</li> <li>Nature of quality control procedures</li> </ul>	<ul> <li>All reverse circulation samples were analysed by ALS for a range of elements by ME-ICP61 and ME-MS62s after a 4-acid digest. Gold was analysed by Au-AA26. Cu values greater than 1% were reanalysed by ME- OG62. Any other elements which exceeded their maximum analytical limits were re-analysed by the relevant over-grade methods for the particular element.</li> <li>Standard reference samples and blanks were inserted at 25 sample</li> </ul>		
	adopted (eg standards, blanks, duplicates, external laboratory checks) and whether acceptable levels of accuracy (ie lack of bias) and precision have been established.	intervals. ALS Laboratories also maintained a regime of check samples, duplicates, standard reference samples, blanks and calibration standards.		
Verification of sampling and assaying	<ul> <li>The verification of significant intersections by either independent or alternative company personnel.</li> <li>The use of twinned holes.</li> <li>Documentation of primary data, data entry procedures, data verification, data storage (physical and electronic) protocols.</li> <li>Discuss any adjustment to assay data.</li> </ul>	<ul> <li>All results were checked by alternative company personnel</li> <li>These are initial exploration holes and as such they have not been twinned.</li> <li>All field logging is done into laptops on site and later checked and entered into the company database.</li> <li>Assay files are received electronically from the laboratory. Repeat results are kept independent and are not averaged. Below-detection limit (BDL) results are saved in the database as - BDL values. BDL results are converted to half the detection limit value on export from the database.</li> </ul>		
Location of data points	<ul> <li>Accuracy and quality of surveys used to locate drill holes (collar and downhole surveys), trenches, mine workings and other locations used in Mineral Resource estimation.</li> <li>Specification of the grid system used.</li> <li>Quality and adequacy of topographic control.</li> </ul>	<ul> <li>Drill hole collars were measured using a hand-held GPS unit with an estimated positional accuracy of approximately 5 metres.</li> <li>Grid used is UTM MGA 94 Zone 54.</li> <li>RL's for the drill hole collars are initially captured by GPS and subsequently adjusted using local digital elevation models (created using the most accurate RL information at the time).</li> </ul>		



Criteria	JORC Code explanation	Commentary		
		<ul> <li>Hole positions will be re-surveyed with DGPS in due course.</li> </ul>		
Data spacing and distribution	<ul> <li>Data spacing for reporting of Exploration Results.</li> <li>Whether the data spacing and distribution is sufficient to establish the degree of geological and grade continuity appropriate for the Mineral Resource and Ore Reserve estimation procedure(s) and classifications applied.</li> <li>Whether sample compositing has been applied.</li> </ul>	The drilling at the Overlander Central and Andy's Hill prospects is preliminary. Only gross relationships can be inferred from this density of drilling and no suggestions have been made to suggest that the results obtained can be extended to larger areas.		
Orientation of data in relation to geological structure	<ul> <li>Whether the orientation of sampling achieves unbiased sampling of possible structures and the extent to which this is known, considering the deposit type.</li> <li>If the relationship between the drilling orientation and the orientation of key mineralised structures is considered to have introduced a sampling bias, this should be assessed and reported if material.</li> </ul>	Holes are oriented as close to perpendicular as possible to the interpreted orientation of mineralisation.		
Sample security	The measures taken to ensure sample security.	<ul> <li>Pre-numbered bags are used and transported by company personnel to the ALS Laboratory in Mount Isa. ALS transports samples to its laboratories in Townsville or Brisbane as required.</li> </ul>		
Audits or reviews	The results of any audits or reviews of sampling techniques and data.	No audits or reviews have been undertaken at this stage however an audit will be conducted as part of future resource estimation processes		

### **Section 2 Reporting of Exploration Results**

(Criteria listed in the preceding section also apply to this section.)

Criteria	JORC Code explanation	Commentary
Mineral tenement and land tenure status	<ul> <li>Type, reference name/number, location and ownership including agreements or material issues with third parties such as joint ventures, partnerships, overriding royalties, native title interests, historical sites, wilderness or national park and environmental settings.</li> <li>The security of the tenure held at the time of reporting along with any known impediments to obtaining a licence to operate in the area.</li> </ul>	<ul> <li>Both the Overlander Central and Andy's Hill Prospects area located within EPM14232. EPM14232 is held 100% by Mt Dockerell Mining Pty Ltd (which is a 100% owned subsidiary of HMX). No royalties are applicable on EPM14232.</li> <li>Both the Overlander Central and Andy's Hill Prospects are located within the Kalkadoon Native Title claim area.</li> </ul>



Criteria	JORC Code explanation	Commentary
		<ul> <li>EPM14232 is in good standing with the Queensland Department of Mines.</li> </ul>
Exploration done by other parties	Acknowledgment and appraisal of exploration by other parties.	<ul> <li>In the 1970's, CEC drilled one diamond drill hole (at Overlander North) and multiple shallow percussion drill holes at Overlander North and South.</li> <li>In the 2005-2006 period, Kings Minerals Limited conducted limited RC drilling in the area. No Kings holes (apart from K-11) tested the Overlander Crackle Breccia.</li> <li>AH-001 was drilled by Syndicated Metals (SMD) in 2011 (and reported to the ASX on 9/1/2012).</li> <li>Soil data (from other parties) has been depicted as two dimensional Inverse distance squared grids or selected contours from gridded images. These grids were created using anisotropic Inverse Distance weighting. The search ellipse looked 400 metres in the long axis direction (000 degrees UTM) and 200 metres in the short axis direction (090 degrees UTM). The cell size was 5 metres.</li> <li>Kings Minerals Limited and Syndicated Metals Limited conducted soil sampling over the prospect which is presented in part in the release figures.</li> </ul>
Geology	Deposit type, geological setting and style of mineralisation.	<ul> <li>At Overlander Central, Mineralisation is located on the margins of and within an altered and brecciated Rhyolite unit. On the margins of the Rhyolite unit the style of mineralisation is shear hosted. Within the unit the mineralisation is more disseminated. The location, style and grades encountered suggest the possibility of a large tonnage target.</li> <li>The mineralisation and alteration discussed at Andy's Hill is of IOCG type.</li> </ul>



Criteria	JORC Code explanation	Commentary
Drill hole Information	<ul> <li>A summary of all information material to the understanding of the exploration results including a tabulation of the following information for all Material drill holes:         <ul> <li>easting and northing of the drill hole collar</li> <li>elevation or RL (Reduced Level – elevation above sea level in metres) of the drill hole collar</li> <li>dip and azimuth of the hole</li> <li>down hole length and interception depth</li> <li>hole length.</li> </ul> </li> <li>If the exclusion of this information is justified on the basis that the information is not Material and this exclusion does not detract from the understanding of the report, the Competent Person should clearly explain why this is the case.</li> </ul>	See the attached table
Data aggregation methods	<ul> <li>In reporting Exploration Results, weighting averaging techniques, maximum and/or minimum grade truncations (eg cutting of high grades) and cut-off grades are usually Material and should be stated.</li> <li>Where aggregate intercepts incorporate short lengths of high grade results and longer lengths of low grade results, the procedure used for such aggregation should be stated and some typical examples of such aggregations should be shown in detail.</li> <li>The assumptions used for any reporting of metal equivalent values should be clearly stated.</li> </ul>	<ul> <li>Interval grades are reported as down-hole length weighted using three copper cut-off grades. 1000, 2000 and 1% Copper. Up to 2m of internal waste has been included. No top-cut applied.</li> <li>Select results of Ce and La are reported in the text utilising a Cerium cut-off grade of 1000ppm.</li> <li>Aggregated results also separately report the internal high-grade intervals.</li> <li>No metal equivalent values are reported.</li> </ul>
Relationship between mineralisation widths and intercept lengths	<ul> <li>These relationships are particularly important in the reporting of Exploration Results.</li> <li>If the geometry of the mineralisation with respect to the drill hole angle is known, its nature should be reported.</li> <li>If it is not known and only the down hole lengths are reported, there should be a clear statement to this effect (eg 'down hole length, true width not known').</li> </ul>	<ul> <li>At Overlander Central the true thickness would be approximately 65% of the quoted intersected thickness. However the strike extent of mineralisation is yet to be determined.</li> <li>At Andy's Hill, drilling has yet to firmly establish mineralisation orientation.</li> </ul>
Diagrams	<ul> <li>Appropriate maps and sections (with</li> </ul>	<ul> <li>See attached figures</li> </ul>



Criteria	JORC Code explanation	Commentary
	scales) and tabulations of intercepts should be included for any significant discovery being reported These should include, but not be limited to a plan view of drill hole collar locations and appropriate sectional views.	
Balanced reporting	Where comprehensive reporting of all Exploration Results is not practicable, representative reporting of both low and high grades and/or widths should be practiced to avoid misleading reporting of Exploration Results.	<ul> <li>Intersections have been quoted at 3 main cut-off grades to illustrate the distribution of mineralisation.</li> </ul>
Other substantive exploration data	Other exploration data, if meaningful and material, should be reported including (but not limited to): geological observations; geophysical survey results; geochemical survey results; bulk samples – size and method of treatment; metallurgical test results; bulk density, groundwater, geotechnical and rock characteristics; potential deleterious or contaminating substances.	<ul> <li>Refer to the release.</li> <li>Aeromagnetics, Gravity, Induced Polarisation and Resistivity data are included in the release. All of this data has been described in full previously.</li> </ul>
Further work	<ul> <li>The nature and scale of planned further work (eg tests for lateral extensions or depth extensions or large-scale step-out drilling).</li> <li>Diagrams clearly highlighting the areas of possible extensions, including the main geological interpretations and future drilling areas, provided this information is not commercially sensitive.</li> </ul>	It is envisioned that these areas will be further examined with a view to defining drill targets during the 2015 field season.